DOCUMENT RESUME

ED 204 606 CE 029 556

AUTHOR	Sniegoski, Stephen J., Ed.
TITLE	Proceedings of a Conference on the Role of Education in the Re-Industrialization of the United States (San Francisco, California, March 30, 1980).
INSTITUTION	Department of Education, Washington, D.C.
PUB DATE	30 Mar 80
NOTE	71p.: This conference was an update of an earlier conference, "Technology Assessment and Occupational Education in the Future" (Chicago, IL, April 1979).
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Economic Development; Educational Cooperation; Educational Planning; *Education Work Relationship; Employment Opportunities; *Industrialization; *Industrial Training; Job Training; Linking Agents; Public Schools; Quality Control; *School Business Relationship; *School Role; Technical Education; *Vocational Education
IDENTIFIERS	*Reindustrialization; Small Business Administration; Small Businesses; South Carolina; United States

ABSTRACT

These proceedings of a conference on the role of education in the reindustrialization of the United States consist of the conference introductory remarks, the texts of five conference presentations, reactor comments and concluding remarks, an executive summary, and a list of conference participants. The first conference report describes the South Carolina Technical Education System, which focuses on improving industrial training by developing special programs, employee-upgrading courses, and occupational programs. The need for greater cooperation between education and the world of work through improved linkages between employers and employee trainers is the subject of the second presentation. Discussed next is the importance of the small business to the American economy. Effective human resource development and management as a path for increasing employment opportunities for minorities, youth, women, and the handicapped is the key issue examined in a presentation on industry-education cooperation as affirmative action in economic development. The final presentation deals with quality control in industry and the training function in industry and the public schools. (MN)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED204606

Proceedings of a Conference on

THE ROLE OF EDUCATION IN THE RE-INDUSTRIALIZATION OF THE UNITED STATES

March 30, 1980

U.S. DEPARTMENT OF EDUCATION

G029552

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Ann M. Martin

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

THE ROLE OF EDUCATION IN THE RE-INDUSTRIALIZATION OF THE UNITED STATES

Proceedings of a Conference

Multi-Sponsored by

Office of Occupational Planning
Bureau of Occupational and Adult Education
U.S. Department of Education

The Council for Occupational Education of
The American Association of Community and Junior Colleges

The American Society for Training and Development

San Francisco, California
March 30, 1980

Edited by Stephen J. Sniegoski

This Conference was an update of a conference on, "Technology Assessment and Occupational Education in the Future," Chicago, Illinois, April, 1979

This Conference took place under the auspices of the U.S. Office of Education but the proceedings came off the press after the Office's staff, programs, and functions were transferred to the U.S. Department of Education upon its establishment May 4, 1980. This document nonetheless contains valid information as a publication for the Department of Education, despite any seemingly current references in it to the Office of Education, its Bureaus, other organizational subdivisions, or activities.

The views presented by the Conference participants do not necessarily reflect the views of the U.S. Office of Education, the Council for Occupational Education, the American Association for Community and Junior Colleges, the American Society for Training and Development or the new Education Department.

TABLE OF CONTENTS

I. Introductory Remarks
Dr. Ann M. Martin.....2

II. Presentations
1. The South Caronlina Technical Education System
by G. William Dudley.....7

2. Education-Work Relations: A World of Work Perspective
by Robert L. Craig.....15

3. The Small Business Administration and Education
by John W. Quimby.....22

4. Industry-Education Cooperation as Affirmative Action
in Economic Development
by Clinton Smith.....28

5. Quality Control in Industry and the Training Function
in the Public Schools
by Leon M. Lessinger.....40

III. Reactors Comments and Concluding Remarks
1. Bart Luderman.....49
2. Dr. Ralph W. Tyler.....53

IV. Executive Summary.....59

V. List of Conference Participants
Presenters and Reactors.....66

PART I. INTRODUCTORY REMARKS

INTRODUCTORY REMARKS

Dr. Ann M. Martin
Associate Commissioner for Occupational Planning
Office of Education, Bureau of Occupation and Adult Education

Good afternoon, everyone. Welcome to the special session on the Role of Education in the Reindustrialization of the United States. We hope that this session will be stimulating, informative, and action-oriented.

The purpose of our gathering here is to share with you an update from our special session last year, conducted on a Sunday at these same meetings in Chicago, and sponsored by the same groups.

For those of you who were not present last year, the first conference special session was on the subject of Technology Assessment and Occupational Education in the Future. Presentations were made by educators and futurists from across the nation. We find now in reviewing the presentations at that conference that the futurists were right on target with their concern for the lagging productivity in the United States, the need for technically trained and skilled workers, and the difficulties we face in national, state, and local planning in a transnational world.

The keynote of this conference, "Reindustrialization" flows from the issues raised at that first meeting. The term and concept is not unique to us. It was first introduced by Brock Adams, former Secretary of Transportation, last summer in an article for the New York Times in connection with the Chrysler situation and later by Jerry Brown, the Governor of California, at a Washington Press Conference in January. Jerry Brown has noted: "The only choice, as I see it, is to reduce consumption, to shift our capital to more investment--environmental, technical

and human--and use both the public and the private sector, use changes in the credit, changes in the tax law, changes in the regulatory process, but push always in the direction of what I call reindustrializing the country to sustain our needs and our competitive position."

Our conference last year highlighted the basic problems in the U.S. economy: declining rates of productivity; decreasing capital investment; increasing interest rates; lack of effective dialog between public and private sectors; rates of inflation threatening international monetary stability; and unstable sources of energy to drive out industrial, communications, and transportation systems. In sum, the conference pointed out the vital imperative for reindustrializing the nation's productive capacity.

Given the aforementioned observations, the following actions appeared to be necessary in order for occupational education to make a major contribution to the productive processes of the United States: (1) Occupational and vocational education must respond, and indeed become a partner with the private sector to develop a trained, employed and productive workforce. (2) Occupational and vocational education must assist in reindustrializing the United States at every juncture of this process. (3) Occupational and vocational education must become an integral part of the economic development strategies of states, regions and local jurisdictions. The participants at that first conference requested that regional conferences be held on issues raised.

During the year since the Chicago conference, the U.S. Office of Education has undertaken a number of projects to foster reindustraillization. My office, the

Office of Occupational Planning, has developed two major initiatives to promote Industry-Education-Labor (I-E-L) collaboration. First, the Office of Occupational Planning is providing R & D funds to four black colleges to develop strategies for improving I-E-L cooperation in their respective geographical areas and to serve as a research base to feed back information to us at the national level. The colleges and their respective sites are: Howard University's Institute for Urban Affairs and Research, for the Baltimore-Washington metropolitan area; Elizabeth City State University for the State of North Carolina; Shaw College for the Detroit metropolitan area; and Huston-Tillotson College for the Austin-San Antonio, Texas region. The Office's second initiative is the monitoring of a Project of National significance to evaluate I-E-L cooperation with respect to improving the quality and accessibility of occupational education.

In coordination with the American Society for Training and Development, the Council on Occupation Education (ASTD/COE), the National Association of Industry Education Cooperation (NAIEC), the Department of Commerce, the Economic Development Administration (EDA), the Small Business Administration (SBA), Academy for the Study of Contemporary Problems, and the National Occupational Information Coordinating Committee and the State Occupational Information Coordinating Committees. We have been preparing to conduct planning conferences in such places as Atlanta, Raleigh, Columbia, Boston, Austin, and Washington on education's role in economic development process. We have been working closely with representatives from State governments, economic development boards, education, and private industry at these meetings. Our objective is to be the catalyst for the development of state and regional occupational planning systems and models.

On February 25-26 of this year we co-sponsored with NAIEC a human resources/ economic development conference for the Northeastern region in Boston. At the conference it was proposed to create permanent State and local action teams. NAIEC and the Office of Occupational Planning will provide these action teams professional assistance upon request. We hope that a similar program will come out of this meeting. Currently, we are working with officials in South Carolina and Austin, Texas to conduct similar conferences that could be used as models of local planning to serve local economic development initiatives. A conference is tenatively scheduled in South Carolina for May 19, 1980.

We are also working closely with the American Vocational Association's Study on Vocational Education and Economic Development in identifying and promoting linkages between Vocational Education and job creation/development. We have also cooperated with the Energy Education Action Center at the U.S. Office of Education in determining energy force needs: Our program today The Role of Education in the Re-industrialization of the United States, will present various points of view, including those of educators, training directors from industry, and government officials.

As we have moved along this year, we have found that the states are emerging as major sources of innovation in devising public administration techniques to better link manpower/vocational education programs with the needs of employers. The State of South Carolina has long been recognized as a leader in tailoring its manpower programs to the needs of employers. This system maintains personnel in each training facility who are charged with the responsibility of identifying employers training needs and assisting in developing appropriate training programs Because of South Carolina's leadership in this area, we have invited Dr. William Dudley, Executive Director of the South Carolina, State Board for Technical and Comprehensive Education, to be our first speaker.

PART II. PRESENTATIONS

THE SOUTH CAROLINA TECHNICAL EDUCATION SYSTEM

G. William Dudley, Executive Director
State Board for Technical and Comprehensive Education

The South Carolina Technical Education System developed in the early 1960's as a remedy for economic problems in a state dominated primarily by textiles and agriculture. At that time, less than five percent of our public school students finished college. Many who did earn college degrees--and many others who comprised the blue collar work force--migrated away to seek better jobs.

South Carolina's TEC System began with a series of crash start-up programs to train selected employees for specific jobs in diversified industries. This crash training idea later developed into a division of industrial services that is the heart of technical education. In the past 19 years, we have conducted special schools training for about 600 industries. A system of 16 colleges later evolved to assure industry a steady supply of technicians. Six of these colleges offer associate degrees in art and science. Ninety-three percent of our programs are occupational programs. This makes us different from many other community colleges and contributes to our success.

Since 1961, TEC has helped attract more than 11 billion dollars in capital investment into South Carolina. We work closely with the State Development Board and the Employment Security Commission to attract industry, to select employees and to train them for rewarding careers. TEC's flexibility has made South Carolina a prime target for Sun Belt development and has established TEC's reputation as an income producing system in our state.

The economics of this decade will demand better planning, more flexibility and a more systematic use of public funds than ever before. Inflation is eroding our buying power, while industries are demanding a more versatile, more highly-skilled employee.

"Design for the Eighties" is TEC's answer to this dilemma. "Design for the Eighties" is a five-part plan to provide high technology training with special consideration for the financial woes of the Eighties.

Right now, "Design for the Eighties" projects throughout the TEC System include release time for faculty to develop co-op programs, development of computer graphics packages for use in all our colleges, a special training program in industrial maintenance, and the development of an energy conservation curriculum.

The center for innovative training and the mobile units that you will see in this presentation are two answers to reducing the expense of high technology education.

Since outlining this concept, we have conducted listening sessions with industrialists throughout South Carolina. They are cooperating with us to fully develop and implement "Design for the Eighties." The specific aspects of this plan—including the budget—will be complete this summer. Industrial involvement and leadership will keep technical education flexible, mobile and relevant throughout this decade. We believe this plan is making us the most competitive Sun Belt State in the quest for capital intensive industry.

TEC INDUSTRIAL SLIDE SHOW

South Carolinians know that South Carolina is a special place. A place for building. A place for becoming. According to a business survey that Alexander, Grant and Company conducted for the American Manufacturers' Association, South Carolina also has some real advantages for new industry.

South Carolina ranks third in the nation as an attractive site for business and industry. South Carolina industry has had fewer lost manhours caused by work stoppages than any other state. South Carolina is fourth in the nation in vocational education spending per capita. South Carolina industrialists pay less for workmen's compensation insurance than manufacturers do in any other state.

Since 1961, the Technical Education System has developed a variety of programs to help new industry in South Carolina. There are special schools, employee upgrading courses and occupational programs. Everything is specially designed to meet the needs of individual employers in specific geographic areas. As TEC meets employer needs, the TEC-trained work force discovers some special career directions, opportunities for professional growth, and job security.

Jerry Harvey completed an associate degree in the early 70's at one of South Carolina's 16 technical colleges. At the same time, he worked in industry, thus receiving many hours of on-the-job training. A few years ago, Jerry completed requirements for an engineering degree. Today he is a manufacturing engineer with technical skills—an artisan and a problem solver able to perform any task in his company's manufacturing process.

Mike Butts, another recent technical college graduate, is a valued employee at AVX, a company closely tied to the computer industry. Mike shares Jerry's enthusiasm for technical education, machine tool technology and his perspective on employment in South Carolina industry.

In machine tool production, as in hundreds of other industries, manufacturers across the country spend much time and money recruiting and training a work force for each new plant. In South Carolina, this expense and effort is reduced through technical education.

Industrial training consultants and representatives from the South Carolina State Board for Technical and Comprehensive Education are resourceful advisors in the start-up process. Their extensive experience, excellent contracts and precise scheduling make them valuable partners for each new industry. State Board industrial training consultants and the entire division of industrial and economic development follow a proven formula for enhancing quality production and reducing employee turnover in each new or expanding plant. By analyzing the industrial process for each company, consultants plan and schedule the start-up program. They coordinate production of training materials, obtain instructors, recruit trainees, and prepare a training facility. By managing the total package, TEC's consultants promote efficiency and satisfaction in industry. TEC special schools training is designed to reduce absenteeism, while promoting individual confidence.

Industrial representatives, based at the 16 Technical Colleges, keep up-to-date with training requirements. Industrial representatives can also explain the benefits of other specially-designed technical education offerings. Representatives

are also in a unique position to learn about new training requirements for specific industries. This information is used to keep training procedures current.

TEC's representatives conduct many surveys, including an annual wage and practices survey. They help set up continuing education programs and provide any information employees may need about occupational curricula at the 16 technical colleges.

Almost two decades of industrial training with a variety of industries have made TEC leadership a focus for worldwide recognition. John Galvin, president of Wheel Trueing Company, an international industrial diamond business, opened a plant in Columbia with the help of TEC special schools training programs.

The South Carolina TECHNICAL EDUCATION SYSTEM has stimulated economic development in this state for almost 20 years. Now, as we enter the 80's, new developments in technology are changing training demands. Laser and microprocessing technology and energy efficiency demand new sensitivity and new ideas. Occupational training during this period will be determined by industrial requests for our programs and services. As industrialists change their production processes, technical training will reflect those changes.

South Carolina industrialists know this state has both the technical resources and human resources to greatly benefit new and existing industry. The South Carolina Technical Education System has dynamic training resources for industrial prosperity in the 1980's. Industries that grow with us are finding a healthy atmosphere for good investment.

TEC "DESIGN FOR THE EIGHTIES" SIDE SHOW

Technology is advancing so fast that in the world of work by the Year 2000, employees will need retraining four or five times during their careers. Estimates are that American business and industry now spend up to 100 billion dollars per year in employee retraining. Futurists forecast that current methods of higher education and technical retraining must extend into the work place and into the home to help people discover new careers.

New technology, new career options and a serious shortage of technicians throughout the nation have inspired a bold plan for occupational leadership in South Carolina. The plan is "DESIGN FOR THE EIGHTIES." It will make the Year 2000 more manageable by interpreting tomorrow's occupational training needs today.

TEC's "DESIGN FOR THE EIGHTIES" addresses five primary training components. These components are curriculum relevance, cooperative education, special schools, industrial training, continuing education and a center for innovative technical training. All components incorporate the advice and expertise of South Carolina's most progressive industrialists who serve on TEC area commissions and advisory committees. Several components incorporate a fleet of mobile training units equipped with advanced one-of-kind equipment to make "DESIGN FOR THE EIGHTIES" flexible, mobile and relevant throughout South Carolina.

Curriculum relevance, the first priority in TEC'S "DESIGN FOR THE EIGHTIES," is the ultimate goal of all occupational training programs. One and two-year

degree and diploma programs in more than 150 technologies have evolved over the years to provide industry a steady supply of skilled employees, but certain programs have become obsolete with changing technology. New concerns in electronics, environmental engineering, energy and health care have stimulated a need for new programs. Basic skills such as math, reading and information analysis remain important in each TEC curriculum. Basic education is essential. But basics are also vital to successful high technology programs.

The second aspect of "DESIGN FOR THE EIGHTIES," cooperative education, is another channel for ensuring curriculum relevance and high demand for TEC graduates. A fresh approach to cooperative internships will allow flexible scheduling of traditional classroom education with specific on-the-job training at one or more industries.

Another component of "DESIGN FOR THE EIGHTIES," special schools, has been the cornerstone of TEC since 1961. Initially special schools were short-term industrial training programs to prepare high school graduates and drop-outs for jobs. Special schools students today come from many educational and cultural backgrounds. Mobile units will provide special schools flexibility. Technical colleges will provide stability. Research will ensure relevance. Specific and immediate industrial training is the essence of special schools. "DESIGN FOR THE EIGHTIES" proposes extending this training beyond the start-up phase to meet new demands of changing technology.

Continuing education will be another aspect of TEC's plan for the Eighties. Listening <u>first</u> is our principle for designing continuing education courses. Success is evident. One corporation alone has 17,000 hours of instruction at Tri-County

for supervisors and managers. Responsiveness is the key to continuing education for the Eighties.

The Center for Innovative Technical Training, proposed in "DESIGN FOR THE EIGHTIES," will be the hub of advanced technology and a forum for industrial progress throughout the Southeast. The center will be centrally located and easily accessible to mass transportation systems. It will feature seminars and exhibits, host conventions, and sponsor numerous workshops and special events. The center for innovative technical training will introduce industrialists to advanced technology, provide a facility for TEC faculty and staff development, and introduce industrial prospects to TEC capabilities. It will be a national resource for information about new processes and innovative concepts.

The U.S. Department of Labor predicts the South Carolina labor force will experience the second largest growth rate in the Southeast in this decade. Approximately 75 per cent of new jobs available through the Decade of the Eighties will require technological training below the baccalaureate level. "DESIGN FOR THE EIGHTIES" will make that training available throughout South Carolina.

EDUCATION-WORK RELATIONS: A WORLD OF WORK PERSPECTIVE

Robert L. Craig, Director of Communications
American Society for Training and Development

Essentially, what I am going to say today is that education and the world of work must work together much more closely if we are going to achieve significant progress in solving the important national problems which relate to this country's workforce: productivity, unemployment, inflation, technological advance, and, in general, to improving the economic and social well-being of the nation.

My remarks derive from two primary sources of information. The first one is the continuing commentary I get from the members of the American Society for Training and Development (ASTD). The second source is my own observation of what is happening on the education and government scene in Washington, D.C.

For those of you who may not be familiar, you should know that our society, ASTD, represents employee education and training, an activity which has become a massive part of the overall education enterprise in the U.S. While we don't have good data, our own extrapolations indicate that employers in the United States, public and private, are now spending some $30 to $40 billion annually in human resource development in the world of work. This is a conserative estimate since it does not include the salaries and wages of those being trained, nor the cost of replacing those employees who are off the job for training, nor lost productivity. The number of members in our society is now nearly 40,000, including those in our national organization and in our 115 chapters throughout the country. Our society and the field is growing rapidly, having nearly doubled in the last five years.

While much of the employee education effort is undoubtedly job or organization specific and must be done by the individual employer, a significant share of the education and training content is probably sufficiently generic that it could or should be done by the traditional educational system. A great deal of generic education and/or training--incidentally we will not try to distinguish the difference between education and training here--is done either in house by employers or by the vast "training industry" that has developed over the past decade or two. Employers invest heavily for employee development in topics such as decision making, interpersonal relations, communication skills of all types--speaking, reading, listening, writing--and so on. All of the indicators we see show that most management education, by far, is done, not by the business schools, but by employers or by the training industry. We won't get into the basic skills problem here but I wonder just what positive effect we might see on issues such as national productivity if all our high school graduates could function at the twelfth grade l el.

Let me quote from a letter dated March 18 that I just received from a member: "Why is the business community creating a shadow education structure? Primarily because the needs they have are not being satisfied by the private education community and they have the resources to satisfy them and will as long as it is cost-justified on the bottom line. The next probable step within the business community is to withdraw its financial support to the private education community and use it within its own program."

The training industry has arisen because many employee educational and training needs have not been met by the traditional educational system. There are probably many more 16-MM projectors in the world of work than in the educational

community. But the training industry encompasses far more than audio visual equipment and films and video equipment and videotapes; it includes many training packages and programs and books and seminars and consulting and other services and materials to develop managerial skills, communications skills, technological know how and just about every knowledge, skill or behavior needed in the world of work. One indicator of just how fast this training industry is growing is the growth in exhibit space at our big annual conference each year. In 1975, we had 13,500 square feet for exibit booth space and at this year's annual convention, just a few weeks from now in Anaheim, we will have 33,400 square feet of space and it is all sold out. That is only the booth space, not the area in the hall. We will have 240 exhibitors in 370 spaces. We will probably have between 5,000 and 6,000 people, all total, at the conference. There is a great deal of education and training done by employers that I suspect most educators do not know about.

So, one point I want to make is that there appears to be a large market potential for the educational community in developing generic skills of the workforce and being responsive to employers educational needs.

That point leads me into another point. It strikes me sometimes that some educators seem to have unrealistic interest or aspiration in the newer or more exotic fields of educational endeavors. For example, I have been hearing about the great educator interest in preparing people for the new energy industry age we hear a lot about. The U.S. Office of Education recently held a conference on "Meeting Energy Workforce Needs." I chaired a panel session there where the attendees were, by a show of hands, predominantly educators. But several people on the panel pointed out that we really did not need totally new curricula for fields such as solar energy industry or probably any other energy sector. Most

of the needs in new energy industries would be for existing skills such as secretarial skills, general management, truckdriving skills. etc. Even the specialty fields of engineering, manufacturing, plumbing, and so forth, would only need modest additional increments or new mixes of knowledges and skills beyond the traditional curricula. There would not be dramatic new changes in needs, and many new skills would be acquired on the job.

I am making these points to lead back to my major point that education and work should cooperate closely so that educators really know what their students need to know and be able to do to be successful on the job.

On-going close education-work liaison can also help with another problem I hear a great deal about from our members: unrealistic career or job expectations. From what I hear from our members, I must conclude that the problem is extensive, ranging from the high school graduate level to the products of higher education. A case of this developed just the other day as we were looking at a proposed Title VI for the Reauthorized Higher Education Act. The new legislation was intended to improve international education at colleges and universities and one part dealt specifically with better service to the international business sector. The corporate trainers I met with to review this pending legislation were particularly critical of university graduates of international programs and their expectations. Incidentally, from what I can learn, no corporate international trainers were consulted in drafting this bill and their reaction to date has been that the bill is not desirable and could even be counterproductive in achieving its well-intended purposes.

At the Wingspread Assembly held jointly a couple of weeks ago by AACJC, ASTD and AVA, Herbert Striner, Dean of Business School at American University,

commented, in his keynote paper, that "Employers must join with educators in order to enrich, expand and equalize the total program of career awareness, career exploitation and career skill development." He said that educators must be honest and admit that only an employer can accurately describe a career and provide the necessary excitement of what the job is really all about. He also notes that getting employers involved, increases the effectiveness of the training and educational process itself and that every vocational course or community college program should be designed jointly by the educator and the relevant industry consumer and be kept up to date in the same way. I mentioned that corporate international trainers were not involved in the drafting of the International Education Bill and and that situation brings me to an overall concern for what happens in Washington. Unfortunately, drafting bills for business training, without involvement of business trainers seems to be the norm. A brochure published by the contractor for a U.S. Office of Education Study of Vocational Education competency measures lists 18 people on a "National Policy Council" of which I find only one person from industry and possibly one employee trainer from the public sector. That same brochure lists a national subject matter panel of 12 people with no one from the world of work. And then, there is a U.S. Office of Education project studying, of all things, Industry-Education-Labor collaboration, that does not have one educator from industry on its 15-member advisory panel of experts. I ask, how can the Feds be effective if they talk only to educator groups and educational consultants?

I had a call only last week from a well-connected Washington consultant who said that a high-level Department of Labor official asked him to explore the concept of getting private sector employers to accept CETA graduates at higher employment levels than entry level positions. Presumably, this would provide the CETA person with a higher level of motivation. This apparently serious pursuit

by an important Fed flies in the face of most of the reaction I get from private sector employers which is that CETA people, by and large, are ill-trained and have unrealistic expectations for job placement now. I cannot believe that these views represent effective linkage and communication between the Feds and the world of work.

And I see many examples of the Feds and the educators talking only between themselves about occupational education which I see as a great failing in our system. While there is a good deal of rhetoric around about this problem, precious little change is apparent.

While there are many examples of good education-work linkage, it is certainly my impression that we need great improvement. Perhaps some of you attended the joint assembly at Wingspread on this issue. In my breakout group on the first evening I was the only person there even remotely representing the world of work. As we went around the room in the introductory process, I got the distinct impression that every educator in the room was doing a superb job of linking up with employers. My conclusion was that if everything was so great we should go back home and not waste our time talking about how to improve things. Actually the nature of the discussion changed during the next two days and I am hopeful that we will be able to accomplish some worthwhile things as a result of the meeting.

Let me make something quite clear. This linkage problem and the onus for doing something about it is not all the fault nor the responsibility of the educator. Employers and employee trainers have at least their share of responsibility for the problem and its resolution.

I want to conclude by saying I think that the best point of contact for educators and Federal education officials with the world of work is their closest counterpart, the employee educators and trainers. These are the people in the field I represent and I hope we see a great deal more effective dialog for the benefit of all of us.

THE SMALL BUSINESS ADMINISTRATION AND EDUCATION

John W. Quimby
Deputy District Director
Small Business Administration

In the way of introduction, the Small Business Administration, an independent agency of the Federal government, is charged with the responsibility to aid and assist small business. This mission is accomplished through our Finance and Investment Division, Management Assistant and Procurement and Technology Assistance.

Small business in the U.S. accounts for 50 per cent of the private sector employment, 43 per cent of the Gross National Product, and at least 95 per cent of small business firms in the U.S. That is our clientele with a nationwide staff of less than 4600 people. That is why I appreciate the opportunity to speak to the American Association of Community and Junior Colleges. With our small staff we are only able to scratch the surface, and certainly need the complete cooperation of this group. SBA now enjoys the cooperation of hundreds of Community and Junior Colleges throughout the U.S. who are working with our Management Assistance Division. This includes co-sponsored management training, counseling for small business owner managers, and seminars on financial management.

For the past 15 years the apparent decline in our country's productivity has attracted increasing attention from national opinion leaders. If "productivity" is more than a buzz world, we must prepare young people to participate with the necessary skills for entrepreneurship.

It is a well-known fact that productivity is increased through small business innovative firms. This part of our economy is creating future employment and increased productivity because of the results from applied research and develop-

ment. Innovation, new products, and new processes developed by creative small business people spur "productivity" in established enterprises. It is here that the contribution of small innovative and technological firms can best assist our national efforts to establish more job opportunities.

Our initial reviews indicate that most productivity data shows a declining rate in large manufacturing plants. Since World War II when the yearly productivity output increased per hour was about 3.2 per cent, there has been a decline in national productivity increase to 0.9 per cent in 1979. These national productivity figures include large companies, small companies, government agencies and non-manufacturing services. In other words, it is almost impossible to get true productivity standards.

Milton Stewart, Chief Counsel for Advocacy, recently held a public hearing in San Francisco on U.S. Productivity and Small Business Innovation. Without a doubt, the small and innovative companies have increased their productivity through their innovative ideas and continue to increase employment opportunities. The updating of technological and innovative companies presents the occupations for the future. The companies that testified all emphasized the problem they have when employees trained by their companies end up by being pirated by large business. At the same hearing on productivity and small business innovation, venture capitalists testified that they are now willing to assist other innovative companies, in addition to the electronics industry, such as the new and budding aquaculture industry. This should open up additional jobs for people with the necessary skills.

I emphasize these factors because through vocational training by Community and Junior Colleges, skilled people will be equipped for new industries with some of our small business innovative companies.

I urge that Community and Junior Colleges continue to play a major role in two categories. First, continue to expand educational courses in entrepreneurship for young people going into the job market. Courses should be available in financial management, accounting, marketing, personnel management, and technical skills. Career Days for young students should start at the high school level and continue through the Community Colleges. There are ample resources available for Career Days through the Small Business Administration (SBA) and the Service Corps of Retired Executives (SCORE). Second, continue to co-sponsor, with SBA and the private sector, educational opportunities for people already in business to upgrade their skills in financial management, marketing and technical skills. I urge that Community and Junior Colleges continue to work with each SBA District Office, especially the Management Assistance Division which can be helpful in providing the necessary talent to accomplish the above.

A good example of the excellent work being accomplished by the Community Colleges is provided by Clark Community College in Las Vegas, Nevada, under the leadership of Tom Jackson. Clark offers excellent classes on small business management. It has the necessary equipment to produce some cassettes on what it has accomplished with small business people attending the various sessions. These cassettes were presented in Washington, D.C. to some of the delegates attending the White House Conference on Small Business.

Many other resources are available to tap for expertise in small business. For example, the National Federation of Independent Business with chapters in each state of the Union has the following:

> Active support and participation in the 180,000 member Future Business Leaders of American Student organization; the 190,000-member sales, marketing and management program of Distributive Education Clubs of America; and the 200,000-member Junior Achievement program.

They can be helpful along with many other Small Business Associations.

Another program that has been extremely successful is the Small Business Institution (SBI). This is a program funded by the Small Business Administration and colleges and universities. SBA produces the cases and the educational institution produces student teams to counsel small business. Unfortunately, federal funding is not available for any additional schools. However, SBA does depend exclusively on some Community Colleges in the State of Hawaii. Maui Community College and American Samoa Community College have contracts with SBA for small business counseling. It is possible that Community and Junior Colleges would want to consider some voluntary SBI-type programs in lieu of federal funding. These voluntary programs do exist in several regions.

Another resource of which you are probably aware is with the Center for Women's Opportunities in Washington, D.C. The program goals are: to significantly increase the number and quality of successful female owned and operated small businesses in the United States; by the 1980-81 school year to see Community and Junior Colleges training female entrepreneurs at the rate of 6,000 per year; and during the 1979-80 college year to train the staff of 300 colleges to offer the program for credit. This two-project program will contain a curriculum guide for teaching. The project is funded by the Small Business Administration.

Public Law 94-305 covers the general provisions for the Office of Advocacy, through a variety of activities concerned with fostering a supportive economic

and educational environment for the encouragement and initiation of entrepreneurship. To achieve these objectives, the following activities will be coordinated by the Office of Advocacy:

1. Definition of techniques to encourage on a comprehensive and systematic basis appropriate entrepreneurial education programs. Promotion of the cultivation of entrepreneurship at all levels in the economic system; this is to include the primary and secondary level, as well as collegiate and postgraduate levels:

2. Initiation of a national awareness campaign which highlights the significant contributions of entrepreneurs in areas such as technological innovation and job creation;

3. Evaluation and initiation of policy proposals which would encourage educators, regulators, and decision-makers in both the public and private sectors to actively and critically consider needs required to enhance the ability of an entrepreneur. Entrepreneurs must compete for scarce human experienced managerial talent.

In the United States a new constituency is being developed as advocates for small business. Delegates from the recent While House Conference on Small Business have organized themselves into a nationwide unity committee. More and more independent small business associations are springing up along with the many trade associations and the Chamber of Commerce to aid and assist small business. I feel that the Small Business Administration and especially the Community Colleges will receive more and more demands to be of assistance to small businesses

which seek to upgrade their managerial talent. This will bring both of our organizations into closer contact at the community level.

Entrepreneurship continues to thrive in our free entreprise system, and we feel it is our mutual responsibility to prepare students for future employment. In my presentation I have tried to present practical and challenging solutions as we update technology assessment and occupational education for the future.

INDUSTRY EDUCATION COOPERATION AS AFFIRMATIVE ACTION IN ECONOMIC DEVELOPMENT

Clinton Smith
Office of Personnel Management

The Institute for Urban Affairs and Research of Howard University is initiating action to explore how educational institutions, particularly minority schools can assume more positive educational efforts at the local level to achieve major affirmative action goals. These goals are to improve the educational delivery system for new entrants into the labor market; to provide continuing education and mid career training for current employees; and in general to promote increased responsiveness to employer needs and changes in the marketplace. The Institute views education's role in an area's economic growth and development as a new and important dimension of the education-industry cooperation movement.

Framework for Action

In President Carter's 1978 "State of the Union" address there was a call for the private sector, business and industry, to assist in the amelioration of the problem of unemployment. The Humphrey-Hawkins Act also stresses the uniting of government and the private sector in attacking the problem of employment.

Considering the ostensibly heightened sense of social responsibility on the part of corporations and the obvious governmental concern, it certainly appears that this is an opportune time for institutions of higher education to act positively in providing leadership in this area of human resource development and management.

The initiation of activities directed at forming alliances of government, industry, and education representatives is for the purpose of planning, technical

assistance and training directed toward the elimination of the problems of unemployment and underemployment.

In its project the Institute specifically plans to address the impact of unemployment and underemployment on all Americans. These are matters of socio-economic significance for the nation as a whole and for individual citizens, unemployed or not. For example, persons who are employed must support the unemployed through increased taxes for social welfare programs and increased taxes per capita for other public services because fewer individuals are employed and in a position to contribute. The nation as a whole does indeed share the responsibility and burden of unemployment.

Private Sector - Public Sector Cooperation

Industry and government, considering their key roles in the employment "system," can make significant differences in reversing the unemployment trend by effectively communicating workforce requirements in terms of short and long range employment needs and opportunities. The educational "system," in term, may then be able to respond to industry's input by providing appropriately-trained individuals. The actual goal of the Institute for Urban Affairs and Research is to develop an effective mechanism to establish open and free flowing communications channels between employment and education, and to then take further steps to strengthen the nexus between educators and prospective employers to increase employment opportunities for all with special emphasis on youth, minorities, women and the handicapped.

Objectives to Assist Education's Response

The primary objectives of this project are: to address career and vocational education needs of individuals in conjunction with the offerings of educational institutions and the projected employment needs of industry in the Washington Metropolitan area; to facilitate the local coordination of manpower, career and vocational information planning; to provide a local clearinghouse service for the dissemination of career and vocational information; to provide technical assistance and training to aid school to work transition activities; and to coordinate with several similar programs around the country. This is affirmative action.

As an example of the need for such affirmative action to improve the process for facilitating education and employment opportunities, a recent study funded by the National Institute of Education dramatically underscores the major opportunities for improvement in administration and management of vocational education programs in more effectively atuning these programs to variations in projected employer needs. The study notes education's overall role in economic development.

The NIE report points out that existing vocational education programs, on which $5 billion is spent annually operate "on blind faith and . . . that the connection between what is taught and earning a livelihood is highly questionable." As a minimum, these programs contribute significantly to the so-called "structural unemployment" problem. At the very best, they do nothing to resolve the imbalances in supply and demand in connection with matching skills and abilities in the labor force to the available jobs and employer needs.

Economic Development Implications

There is beginning to be an increasing awareness of the crucial role education, and human resource development and effective management, play in economic growth and development both nationally and locally. For example, a recent report by the Joint Economic Committee of Congress, entitled, Midyear Review of the Economy: The Outlook for 1979 (page 64) stated:

"In our view, it is possible to enhance dramatically our potential GNP growth prospects in the coming decade with a carefully designed program aimed at promoting capital spending and upgrading worker skills (emphasis supplied). Not only would such an approach raise productivity growth, and therefore our GNP potential, but it would also bring about further improvements in the areas of inflation, employment, and our balance of payments."

A major focus of the Howard University study will be on exactly these and related issues. For example, how can the educational establishment the producer of human resources, more effectively respond to the needs of the major consumers of human resources in the marketplace (particulary in the private sector, and within it the smaller businesses where most jobs are generated)?

It is our intention to carefully consider the implications of the striking cost in tax dollars of educational systems. Some experts estimate that on the average as much as 60 per cent of general revenue funds (tax dollars) go into local educational systems. Obviously, we are concerned about the other side of the coin--employment--where the personnel costs in so-called labor-intensive organizations or industries range anywhere from 70 per cent to 90 per cent of total budget,

according to estimates by the U.S. Chamber of Commerce. In summation, the project staff will look carefully into the problems of allegedly ineffective school systems and the very real problem of needing to increase individual workers and organizational productivity in order to improve GNP. While we as yet have no answers to these questions, we believe and hope that we are on the right track in our inquiry into the real question and problem of structural unemployment, underemployment, and misemployment.

Small Business Implications

A recent study entitled The Job Generation Process (David Birch, 1979), conducted by the Massachusetts Institute of Technology, points out that between 1969 and 1979 "Small firms, with 20 or fewer employees generated 66 per cent of all new jobs generated in the United States. . . . Middle-sized and large firms, on balance provide relatively few jobs." According to the study, "The job generating firm tends to be small. It tends to be dynamic (or unstable, depending on your viewpoint), the kind of firm that banks feel very uncomfortable about. It tends to be young. In short, the firms that can and do generate the most jobs are the ones that are the most difficult to reach through conventional policy initiatives" (emphasis supplied).

Another study, entitled Central City Businesses: Plans and Problem (Joint Economic Committee of Congress, 1979), not only also points out that small businesses possess the greatest potential for net new job creation and operation expansion, but also brings out the irony that government at various levels has expended more efforts in helping large businesses.

Overall, therefore, since these small and medium-sized companies provide the majority of the new jobs, our educational system(s) must be responsive to the need of small firms for a well-trained, productive, and efficient workforce. Accordingly, one phase of our study will consider:

(1) how effectively small businesses plan for and communicate their human resource needs to the schools and other sources of supply; and

(2) the extent to which schools are meeting the needs of smaller businesses through appropriate curriculum offerings, staff development, and school-based job placement (co-op education) programs.

National Implications

In the broader context, of all the burning issues and questions confronting our society today, probably the potentially most divisive is the issue of affirmative action and the variety of interpretations being given the meaning and intent of affirmative action programs. In attempting to bring about positive change and progress for particular groups within our multiracial society in America, affirmative action has raised the issue of so-called reverse discrimination. The Bakke, Sears, and Weber cases all illustrate the problem with which we are confronted.

In short, that problem is how to really make this democracy work more effectively than it has. It seems fair to say that even after two centuries it can still be considered an experiment in democracy. Our real challenge for the future

is to make democracy work for all people. Affirmative action is not dead, as some think or wish. But it has to be given a real chance to work, to perhaps take a different form, and to be implemented on a broader basis to improve the system for all people. Specific approaches must be developed, particularly with regard to how the program of Industry-Education-Labor Cooperation, with the emphasis on more effective planning at both the national and local levels, which can help in resolving this dilemma and in moving toward a more effective way of solving our national problems of unemployment, underemployment, and misemployment.

This is a nation of minorities, the largest of which is the black minority. When we consider how we can be successful in the effort to assist any one or a few groups, through affirmative action, to somehow make up for past injustices, we are confronted with questions of how you can favor one group without somehow shortchanging another group. And if you do begin to pursue some kind of affirmative action for the whole range of various groups the whole effort becomes meaningless.

For example, in our Government-wide equal employment program which should operate within the concept of "merit principles," there is no question that we have to admit to such a problem, and I would characterize it this way:

> "What do you do when you have only one pie and it is to be served to all - including women, blacks, the Spanish speaking, Indians and other minorities--on the basis of affirmative action under the Equal Employment Opportunity Law, and at the same time on the basis of merit principles and in a strictly impartial manner to all competitors without regard to race, creed, color, national orgin, age, handicap, and so forth?

This is obviously a very complex question, yet we must find a way to get rules and regulations in the personnel and affirmative action areas, and in the most cost-effective and productive manner possible.

Unfortunately, we know that in some cases, affirmative efforts have too often been made in a preferential manner for members of special groups at the expense of other groups. This kind of approach is clearly in violation of the law and of the rights of others. It is illegal to discriminate, even in the pursuit of the objectives of black, Spanish speaking or women's programs. In light of recent court cases and administrative rulings, we might expect that in the future, laws barring preferential treatment for anyone in any case will be strongly enforced where such violations come to light.

Redefining Affirmative Action

Now, as a positive change of pace, after attempting to outline the problem and stating what we should not do to resolve it, it seems appropriate to suggest a method of considering the questions of perceived conflict between Affirmative Action (or EEOPrograms and "merit" as an opportunity to improve personnel and management, generally. Under the leadership of the Interagency Advisory Group, we have strongly advocated a different approach to overal management of personnel and to question the merit system/EEO "conflict." We have referred to it as "work-force planning." Not only do we believe the solution to a number of management ills lies largely in more systematic and effective management planning and forecasting of human resource needs at the Federal level, but it should work at the state and local levels of the public sector as well, and in the private sector through the mechanism of the local Industry-Education-Labor Council.

We believe that instead of having EEO affirmative action standing alone as a separate and seemingly conflicting objective, it ought to be emphasized as an integral part of the total fabric of an organization's management planning, bugeting, and forecasting of staff needs. This is obviously a very significant change in how we look at Equal Employment Opportunity. We have encouraged a systematic approach under which public and private sector organizations should look at their management plans as they develop them each year and forecast the size and type of workforce each organization will need in cycles of 1, 3, and 5 years to meet those future programs goals. Under this approach, the evaluation of management's affirmative action efforts will be based on and evaluated against the effectiveness of steps taken to get the needed size, type, mix and variety of workforce and the specific skills, knowledges, and abilities needed to meet the management goals of the organization.

Equal employment opportunity affirmative actions will become an integral part of the process of developing all staffing plans and the affirmative action results would be considered as only one major indication of the presence or absence of an effective EEO program. To achieve a more successful affirmative action program within a forward looking personnel program, we have to emphasize management's accountability in how it manages its total human resources.

Other, and maybe even more realistic indicators of affirmative EEO efforts would include how effectively an organization plans for getting, developing, and keeping the talents it needs to meet its mission goals. We repeat, numbers will still be stressed, but management becomes more accountable for how those are achieved.

Accountability

This different approach to looking at affirmative action provides a vehicle for outlining how staffing plans for effective human resource utilization can be married most effectively to the organization management plans. In other words, managers should be as accountable for effective use of human resources as they are for financial resources. Even more importantly, this is designed to strengthen the personnel and affirmative action functions, giving the personnel director and affirmative action staff more input and influence into management decisions to help in making realistic decision on job mix, upward mobility opportunities, and on what skills, knowledges and abilities will be needed to meet future program goals.

When managers are required to look ahead and forecast their workforce needs, this will enable an organization's personnel office to plan for recruitment of the people in advance and also plan for their training, development, and more effective utilization. It will then also enable the organization to communicate those needs to sources of supply: to its own workforce, (which involves cooperation with labor organizations), then to schools and universities and organizations of all kinds, including those comprising principally minorities and women.

Closing the Loop-Locally and Nationally

Our Washington, D.C. area efforts are therefore designed to demonstrate how an Industry-Education-Labor Council at the local level should ideally give life to this process by mobilizing the resources of the community to meet the goals of more responsiveness by the educational system, particularly in staff

development, curriculum changes, and school-based job placement programs. The bottom line is that, considering the amount of money spent on education manpower programs and training by industry to meet its own needs, we need to make sure that the taxpayers get a better return on their investments in education as well as employment.

In summary, a key to success in these efforts appears to be political and administrative focus on institutionalizing planning and redefining affirmative action, as the process by which we meet national goals of reducing unemployment and underemployment, fighting inflation, increasing productivity, and promoting economic development through emphasis on:

(1) how public and private employers go about planning for finding, training, and effectively managing human resources;

(2) private employers' communication of their forecast, including training and career development of their current workforce, to sources of supply, including educational institutions; and

(3) education's responsibility for meeting these forecasted needs through occupational planning, staff development, and curriculum changes.

When the schools know in advance what employers will be hiring for, they can prepare their students. The emphasis will then be on giving people an opportunity to develop their potential and innate creativity and to utilize it in the most productive and effective manner, thereby contributing to overall economic development.

In the final analysis, our overall goals are to pursue affirmative action and to promote national economic development and balanced growth through greater emphasis on more effective planning, development, management, and the utilization of human resources--the most valuable of our nation's natural resources.

QUALITY CONTROL IN INDUSTRY AND THE TRAINING FUNCTION IN THE PUBLIC SCHOOLS

Leon M. Lessinger, Superintendent of Schools
Stockton, California

One of the major keys to the required re-industrialization of the United States is the successful implementation of the quality control function in the production of goods and services. Currently other nations, such as Japan, seem better able to master and apply this function. The consequence to the United States of an unfavorable comparison in the mastery and application of the quality control function is seen in the lowered status and more difficult marketing of many American products and services. Continued unfavorable comparison will have catastrophic economic results for the nation.

There is a direct link between poor work discipline and poor basic training in the public schools and the subsequent failure of people who go through the school system to master, understand and apply quality control in the workplace. There cannot be a long-range solution to the required re-industrialization of the United States without incorporation into the schools on a crash basis of the training function for vital skills, knowledge and attitudes.

Training is the foundation of all successful schooling. Human beings have the ability to pass on to others the knowledge and skills they have mastered. The process of deliberately passing on that knowledge and skill so that it can be demonstrated in a required setting is training.

We know a great deal about how to train; we know rather little about how to educate. We know there is a difference between training and education. Education is based on training. Without proper training quality in public education is possible.

We know a great deal about the basic components of training, what I call, the trraining basics. Most teachers in the public schools do not know or systematically use these training basics. They, themselves, were not trained in these basics. When teachers are trained in these basics they readily master them. If there is proper quality control system in the school in which they work, they will employ the training basics they have mastered. When they employ them, the students readily master the important knowledges, skills and attitudes, many of which they had previously failed to master.

If education is to have a meaningful role in the re-industrialization of the United States, it must incorporate, on a crash basis, the training function. We must make TWE as a high a priority for the public schools as once we did TWI for industry during World War I and II.

Training Within Education (TWE) is best understood by reviewing its analog, (TWI) Training Within Industry. Training is most systematically and intensively addressed when there are crises. The world wars in this century presented just such crises. With the outbreak of World War I, there was a desperate requirement for trained workers. The government impressed into service the work and practices of an "educator," Frederick Herbart. His four-step method, widely used by trained teachers of that time for their lesson-planning, was translated into, "show, tell, do and check." These four became the building stones for the most successful training effort up to that time. When World War II started an even greater training effort was required. A War Production Board was established to spur the production of essential products. Within that organization a Training Within Industry (TWI) was formed to bring leadership to the training effort. TWI expanded Herbart's for steps, added important concepts from Thorndike, Mann and Dewey, and produced

a seven-step method of instruction called JIT, (Job Instructor Training). The seven-steps consisted of:

1. Show workers how to do it.
2. Explain key points.
3. Let them watch you do it again.
4. Let them do the simple parts of the job.
5. Help them do the whole job.
6. Let them do the whole job--but watch them.
7. Put them on their own.

After the JIT Program had been in existence for a year, TWI developed JMT, Job Methods Training. The J Programs professionalized the field of training. We can see their influence in the major training programs in use today in business, in industry and in the military. They are not systematically employed in public education. The Army and Navy operate the largest educational system in the nation. They used the methods of the training basics to have persons master the regions content of technical tasks. It was not so long ago that business, industry and the military used the familiar approaches still used in public schools. It took wars and some debacles to force fundamental changes away from these inefficient and ineffective methods.

The Training Basics In Public Education

Principles:

1. All classes would start with and grow out of a careful and detailed analysis of the particular tasks to be mastered or undertakings to be completed. The careful and detailed analysis would progress through and include:
   (1) the specification of required knowledges and skills;

(2) the determination of the objectives which yield mastery of those specified required knowledges and skills;

(3) the development of the content and techniques for mastering the objectives;

(4) the description of the organization of the classroom program; and

(5) the methods of evaluation and improvement of the classroom program.

2. Training is thorough and efficient when it is performance based. The emphasis should always be on active skill practice and demonstrated mastery of students would practice both the task elements and the entire task.
3. Students may not progress until they have reached a pre-set standard of performance. The assessment of a standard is go/no go, yes or no. The student who does not reach a criterion level would receive additional practice until he or she does master the objective.
4. Students learn best in a proper functional context. Medical trainees are best trained in job-relevant situations. So are lawyers and plumbers. Theoretical or technical material is presented only when needed and along with or after students have experienced the "how to."
5. For various reasons people learn best at different rates and in different time periods. Thorough and efficient training uses a mix of self-paced methods, personalized methods and group-paced methods.
6. Without knowledge of results there can be little improvement. Thorough and efficient training is built upon feedback from the learner and from the evaluation of both the instructor and the instruction. The student is guided by continuous formative results en route to task mastery.

7. Over all the training process stands quality control. To discover whether or not the training system is working as it should, a quality control system is built into each phase of the training program. Formal and objective reporting of results is required.

We ought to set up an equivalent to the process which made this country the arsenal of democracy in World War II. I am referring to TWI, Training Within Industry. I think we must install as soon as possible TWE, Training Within Education.

We have neglected the training component of education; we spend too much time teaching people about ideas and skills and not enought time requiring students to demonstrate their mastery of those skills and ideas in the settings where they are essential.

To repeat, we need for education a TWE based on the success of TWI in World War II. A little history is useful, if applied. At the start of World War II, the need for trained workers caught American industry off guard. To deal with a genuine crisis, an advisory service was formed by the federal government and given responsibility for finding ways to help our industtries achieve maximum utilization of human resources. Much of the credit for the industrial triumph of our country is authoritatively and rightfully given to TWI. It did more than train workers. It provided new ideas and new ways of promoting the human side of an organization. In fact, many experts cite TWI as the mainspring for the development of modern training in the whole field of management.

What interests me in particular, as an educator, is that TWI got much of its basic thinking for the development of its hugely successful educational methods from a number of educators. Among these were Horace Mann, John Dewey, Edward Thorndike and Johann Frederick Herbart.

We can overcome the dreadful neglect of training in public education and make the required contribution to the re-industrialization of the United States by:

1) Setting up an advisory group modeled on TWI to be called TWE and to be lodged in an appropriate place;
2) Prepare all educators in the training basics by disseminating Good Practice to them.
3) See that the Good Practice becomes Standard Practice.

I have time to list five items of established training practices. Were we to use only these systematically in our schools, we could achieve a massive increase in our efficiency and effectiveness in imparting the vital skills, knowledge and attitudes to our nation's children and adults.

1. Make it clear to students just what they are supposed to master. (If you want me to fix a flat tire or spell a word correctly, show me a repaired tire or the correctly spelled word. Show me how, let me do it, check me and then tell me how I am getting on so I can improve my performance.)

2. Take advantage of what students already know and can do before they meet with us. This may be hard on our status. Why must we feel that a student cannot really understand something he/she obviously has mastered because he/she has not gone through our particular process?

3. Allow enough time for qualified people to finish. We do not commit time-based follied when our lives depend on certain mastery. Learning to fly an airplane, for example, should be our model. Students work on landings until they can do them; they master navigation before we let them practice cross-country flying. We need such logic in reading and in other areas of academic, vocational, civic and physical fitness.

4. Provide practice-time under guidance. For example, we must resist the strong temptation to tell students and then do it ourselves. If you want me to learn, let me do it under your guidance, check me, give me feedback and let me do it again to show my mastery.

5. Test often and in a non-threatening way. Testing is the "handmaiden" of training. In training the test reflects the tasks we must master. Further, we must test to achieve control; i.e., evaluation plus corrective action.

We have all seen the quotation which is often printed on posters, it reads something like this:

Give me fish and I eat for a day,
Teach me to fish and I eat for a lifetime.

The quote is, perhaps, simplistic, yet it contains a message for all of us who teach or manage. We cannot afford to allow public schooling to be merely a superficial, vicarious experience. We must make the learning process a participatory process wherein each student, regardless of level or program, receives knowledge and gains insight and wisdom through demonstrating the results of his or her experience. It is simply not enough to attempt to teach about the knowledge that is necessary for survival and growth in this complex world.

I think it is past time to build TWE Training Within Education. We won a war, in part, because we became the arsenal of democracy and this involved TWI, Training Within Industry. We can go a long way toward winning over our present economic as well as educational crisis.

PART III. REACTORS COMMENTS AND CONCLUDING REMARKS

Bart L. Luderman, Chairman
Vice President and Human Resources Development Administrator
Lloyds Bank
Los Angeles, California

I have a lot of things to say about education myself, but by and large, I think that the community colleges have done a better job of providing linkages with the world of work than other schools. They have done that because I think that they see their obligation is to provide human resources for manpower. In California, I have seen some very innovative things happen in my own industry. For example, we are the only state in the union that I know about that has our own cooperative education association and we believe that any kind of linkage we can build between education and work is going to help the whole cooperative effort and the competence based efforts for people within our industries.

The other thing that I see is that within our own industry, banking, we have established a banking and finance degree in 82 community colleges in California. The curriculum is being planned by the training people within the banks in this state. And we have a lot of people going to school to take this program. It took us seven years to establish this program because educators and trainers do not understand each other to start with. I think we need to do a lot in establishing cooperation between these two groups. I think that the South Carolina model and some of the other models that we heard about were really excellent in furthering this cooperation.

I would like to learn about the counseling effort in South Carolina. I think that one of the biggest things that we need to work on is the counseling effort because I do not think anybody does it well. I think the educators have a tremendous responsibility in that area and I think we do also. I think we have

learned to counsel a little bit better because we have had to do it. But I think we have a tremendous way to go in the counseling efforts.

Dr. Lessinger talked a lot about quality control and said that there is a direct relationship between poor work discipline and poor training in the schools, and I agree with that view wholeheartedly. One of the things that I think has done a lot to harm the training and education effort--the effort with education and industry--is government contracts. I feel very strongly about that, and if I had my way, we would never use government contracts within my bank.

We talked about poor discipline and poor training in the schools. The CETA program is an example of this poor discipline training. CETA provides people with luncheon money and bus money in addition to their regular salary. That is a poor practice because that is not what happens in the real world of work. And students need to learn, no matter what type of learning they do, what to expect when they actually get a real job. Providing them with things that they do not receive when they go to work is not the way to discipline them for work.

Dr. Lessinger stressed the need for more training as opposed to education in the schools. I am in total agreement with that view. It is absolutely true, as Dr. Lessinger contended, that industry has gained a monopoly in the training area. In the training department in my bank, which has 4,000 employees, there are 29 people with a budget of $4 million. It is imperative to return the training function to the educator. Education must become relevant to the working world. Every school must emulate the practices of the South Carolina's TEC.

Clinton Smith talked a little about the affirmative action area. I would just to make a few comments about that. I really think we have done a lot in the private sector about affirmative action and I do not think we need to place as much concentration on it as we have in the past because I think we already know how to handle it. I do think there is a whole new effort in the retraining of senior management people that belongs to the colleges. One of the things he said that management must learn is to be more accountable in its management of all employees and that this came about as a tremendous move in the affirmative action area. And I think we need to provide some really good retraining through the colleges for senior management people. I do not see that being done anywhere. I think they will respond to it once they see it really making something happen.

Bob Craig talked about the need for making people understand that jobs like secretaries and file clerks are important jobs. I think that we need to do things like that if we are going to find employees for work and make those employees effective.

What I would like to say is I think that it is very obvious that we can cooperate--that we can work out linkages. My seven years with banking and education experience demonstrates that and I would never withdraw support from schools. I think they are too important to our own effort. I think we need to realize what we both do best and we need to provide some linkages in that area. Educators by their very nature are very creative people. They excel in doing research, in using the media and in administering and evaluating tests. Educators know how adults learn. In essence educators know how to educate. Trainers, on the other hand, know how to train. We know how people learn at work; what management wants; and what it means to relate to the bottom line. We understand why we need career

counseling. We understand the basis of learning and we recognize a very good performance and how it relates to development and to people working. I think that we ought to recognize that the different talents of trainers and educators demand a collaborative approach. I think we ought to establish this collaboration at the local level because I do not think we can do much about it at the national level. I think we ought to ask Washington and some of the people that represent us in Washington to give us more moral support and more tax support than they do money support. I think that if you do an effective job in education you do not have to ask for government money because I think industry will pay for it. I think we should accept the excellent models we heard about today. Let us accept each others differences. Let us get on with it and develop some linkages that will really make things work.

DR. MARTIN: Thank you, Bart, now we have Dr. Ralph Tyler. Dr. Tyler does not need any introduction. I think he is known more for what he has contributed to this nation than for the jobs he has held. Dr. Tyler was the founder of the curriculum movement back in the thirties, the architect of the national assessment program, and one of the top advisors at the National, State, and local level on educational issues of high priority.

Dr. Ralph Tyler
Senior Consultant
Science Research Associates
Chicago, Illinois

Much has been said that is relevant to the problems that were introduced last time: namely, that we are approaching and involved in a very rapid change in the nature of work. Increasing modern technology has meant a rapid shift over the last twenty-five years from much of work depending upon manual dexterity and physical strength to work that now depends much more on intellectual and social skills. I think the presentation today clarified some of the questions that were raised last time. As Kenneth Boulding has said, there is one thing we know about the future, it will be full of surprises and it is not possible, nor desirable, to plan for long periods ahead. But it is possible, as shown in the South Carolina illustration to make projections a short time ahead and to provide training opportunities where the work is needed. And this planning must be done at the local level.

It is also important to stress what is learned outside of both the school and the workplace. The home, probably, in most of our lives has meant more to us than the school in terms of the things that we have learned. What we learn from a peer group at various ages has been shown to be fully as much as we learn from any other source. And in every generation young people learn what adults that they respect consider important. So when you see shortcomings in youth, you should look at the adults who are getting the attractive attention.

In the ghettoes I have visited, for example, the people that look most attractive are often the drug pushers with their big Cadillacs and the prostitutes with their gaudy clothing. How can you expect a child growing up in that environment not to see those activities as something worthy of emulation? Educators must consider

the nature of that home environment, especially as it is affected now by the powerful influence of television along with the other mass media. Although the development of skills is very important in increasing productivity, the development of attitudes is also very important. I know perhaps 25 or 30 percent of our young people have what we would call achievement motivation. They are confident that they can move ahead and they want to move ahead. They have a positive attitude.

On the other hand, something like 35 percent of our young people believe that there is no reality to work. They do not expect to get a job. That is why it is so imporant to have widespread cooperative education, not just for a favored few. The number of young that have actual work experience in cooperative education is far less than 50 percent. Because of the reality of work--that there are jobs that can be had--one does not have to prepare to live on welfare.

Work must have meaning. Work means producing something that people need and want. Most training programs do not talk about what the student will contribute. A poet mentioned the importance of that a hundred years ago in talking about two workmen. One was asked what he was doing and replied that he was laying brick. The other said he was building a cathedral. And I have looked at a number of training manuals and I find very few that provide some notion of the mission--some sense of the importance of that work. And this sense of mission is a vital part in increasing productivity. If work means the building of a cathedral, the worker will put more effort into it.

Satisfaction in work is also important. I think that Studs Terkle greatly exaggerated dissatisfaction in his book on work. When I asked him where he found that many dissatisfied workers because public opinion polls show that the percentage of persons

who dislike their jobs is not that large, he said, "Well, I was looking for people who didn't like their work. Nobody wants to read about people who do like their work."

The satisfaction gained in one's own achievement and contribution to others is an important aspect of work that many young people lack. Training is helping them to get the satisfaction that the old craftsman had when he produced a good product, the satisfaction in achieving something he found difficult to do and the satisfaction in seeing what that means to somebody else. And those are aspects that are pretty important in terms of increased productivity.

Work must allow opportunities for growth. We know that about 30 percent of our young people, under the present arrangement for employment, will have no career. Their typical work pattern is: They will work for several months; next they are without a job, perhaps they voluntary stopped because they have enough money to buy a car or to marry or do something else that is important for consumer satisfaction; then they are unemployed for a period of time; finally they go back to work. This work pattern does not allow for personal progress or growth. There is no opportunity for a career, an opportunity to get ahead. It is essential to provide everyone with a sense that there is opportunity for development. This vital factor must somehow be incorporated in our work-education programs.

Education must also combat some of the present moods: the mood, for example, that the important thing is consumption and not production; that it is what I get rather than what I give; that satisfaction comes from rest and relaxation. Do you realize that at the present time if you look at the census of employment that next to education and health the largest employment is in areas of recreation? This phenomen is not completely new. As a young professor during the 1920's

I was very conscious of this view. In 1928 Mr. Hoover campaigned for President on the statement that: "We are an affluent society. We need to have poverty no longer, and if I am elected, there will be two chickens in every pot and two cars in every garage." He was elected in November of 1928, inaugurated in March 1929, and the crash came in 1929.

During the 1920's, like now, there was total absorbtion with consumption without concern for production. I think that we ought to have learned that lesson. If we are going to help our young people increase productivity and get the U. S. back into the international markets, we have to deal with attitudes as well as with skills. Now there are two things about skills that are still for many of us not very well-defined. We know that there are skills that have wide employability and there are specific skills. How much general knowledge and skill needs to be developed so that the specific ones that we need for the rapid change can take place? Many jobs are based on the same general principles with some modification. There is great difference in the training programs that I have observed as to whether they emphasize general or specific skills.

I was working with a maintenance training team at an Israeli air force center near Haipha one time about twelve years ago. They have very specific training for their maintenance people on Mirage planes. I pointed out to them that if the French stopped selling Israel the Mirage planes and they had to get their jets from the U.S, all of their maintenance people would have to be completely retrained. Fortunately, this seemed to make sense to the generals and they changed to a more general training program. But the question remains as to how much you can build on general understanding of the basic principles, or whether you concentrate so much on the specific that the students do not understand the general ones.

We also have something like a five thousand year problem of how to integrate vocational occupational, and general education. This is especially important because in our society, the ambition every since the time of the Declaration of Independence has been that everone would be both a ruler and a worker. The goal has been to make every American both a producer and a citizen, able to make decisions that require broad understanding. The flexibility that was shown by Mr. Dudley in the program of South Carolina in occupational education is needed for general education as well. I would like to close by saying that I have learned a great deal from these presentations and I think that they have answered some of my questions of the last year. But we still have some important questions that we are exploring and these ought to be discussed in the future. Thank you.

ANN MARTIN: Thank you, Ralph. I think Bart Luderman probably said it all when he said, "Let us get on with it."

I would like to thank you all for your patience in sitting through the extended period of time. We ran over, but I thought you would like to listen to our reactors. I would like to hear from you regarding what you are doing in the States and in your local colleges; what kinds of action you have taken; what kinds of promising planning practices you have devised for linking up with the private sector and with your economic development offices. We would appreciate it very much if you would feed this information back to us. We are moving ahead, planning various regional conferences and efforts and we would like to be informed of any interesting innovative things that can serve as models for the planning activities that we have at the national level.

I am going to turn the program over to Kathy Arnes who will have a few words to say.

KATHLEEN ARNES: Thank you, very much, Ann. I really do have a few words. I would like to thank very much our presenters, our reactors, and our audience, and to invite all of you to the Council for Occupational Education Reception in Room 516 immediately. Thank you.

PART IV. EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The conference on the Role of Education in the Re-industrialization of the United States held in San Francisco, March 30, 1980, was a follow-up of a conference held on April 29, 1979, in Chicago, Illinois on Technology Assessment and Occupational Education in the Future. The proceedings of this earlier conference have already been printed and are available to the public. Dr. Ann Martin, Associate Commissioner for Occupational Planning, U.S. Office of Education, organized this followup conference in part to provide a forum for the reporting of progress and developments nationally during the ensuing year in private sector involvement in education and the development of planning efforts to more systematically link education and training to economic development and labor market needs.

The convenor of the conference was Kathleen Arns, President of the Council for Occupational Education.

Dr. Martin, as Conference Moderator, began the conference by pointing out economic problems of the United States--inflation, unemployment, lagging productivity, decreasing capital investment--that demand a national program of re-industrialization, that is the revitalization of America's productive capacity. Occupational and vocational education, she pointed out, must play vital roles in this undertaking. She recounted her office's efforts in this area.

The Office of Occupational Planning has developed two major initiatives to promote Industry-Education-Labor (I-E-L) collaboration. One of these initiatives consists of the provision of funds to four black colleges (Howard University, Elizabeth City State University, Shaw College at Detroit, and Huston-Tillotson College) to develop strategies for improving I-E-L cooperation in their respective geographical

areas. The other initiative is a Project of National Significance supported by the U.S. Office of Education to evaluate I-E-L cooperation with respect to improving the quality and accessibility of occupational education. Also, in cooperation with various Federal, State, and private agencies, the Office of Occupational Planning has been providing leadership for education's participation in economic development programs in various states, regions and multi-county areas, including the Northeast, North and South Carolina, Pennsylvania, Metropolitan Washington D.C., Austin-San Antonio, Detroit.

The first presentation was made by G. William Dudley, Executive Director of the South Carolina State Board for Technical and Comprehensive Education, who discussed the South Carolina Technical Education System (TEC). Created during the early 1960s, TEC focuses on improving industrial training--developing special programs, employee upgrading courses, and occupational programs. Originating as a series of crash start-up programs, TEC has evolved into a system of 16 technical colleges providing courses geared to the South Carolina job market. TEC closely cooperates with South Carolina business and industry in developing the proper training programs. Currently, TEC is emphasizing its "Design for the Eighties" program which concentrates on training for the emerging high-technology industries. This program consists of five primary training components: 1) curriculum relevance; 2) cooperative education; 3) special schools industrial training; 4) continuing education; 5) center for innovative technical training. As the new high-technology industries expand, South Carolina, as a result of TEC, will have a trained labor force ready to fill the emerging job positions.

Dr. Robert L. Craig, Director of Communications, the American Society for Training and Development, stressed the vital need for greater cooperation

between education and the world of work. He held that the key point of contact in this linkage should be employers and employee trainers. Craig bemoaned the fact that the Department of Education has had little contact with individuals from this field.

Dr. Craig pointed out that many new employees are unable to perform any of the tasks of their jobs, even the most basic. As a result private business must spend vast sums of money (around $50 billion annually) to train its employees, providing even generic skills. If the education establishment were providing the correct type of training, much of this private business training would be unnecessary, and a large amount of money would be available for other types of investment. To develop the correct type of training courses, the educational establishment must rely on the advice of private business, especially the employee educators from industry.

John Quimby of the Small Business Administration (SBA) pointed out the vital importance of Small Business to the American economy. Small business employ one-half of the private sector work force and develop a disproportionate number of the innovations that help to generate new jobs. An increase in the ranks of small businesses would lead to an increase in American productivity and employment.

Mr. Quimby stressed that community and junior colleges should expand their entrepreneurial courses for students, including people already in business who wish to upgrade their skills. There are many outside sources who can help educators formulate entrepreneurial programs. These include: 1) National Federation of Independent Business; 2) Small Business Institutes funded by the SBA; 3) Association for Women's Opportunities in Washington, D.C.; 4) Office of Advocacy in SBA.

Mr. Clinton Smith, Office of Personnel Management, offered a paper on Industry-Education Cooperation as Affirmative Action in Economic Development. This presentation stressed that effective human resource development and management is affirmative action redefined.

Mr. Smith discussed a project funded through the Office of Occupational Planning at Howard University's Institute for Urban Affairs and Research as an example. The Institute's goal is to strengthen the nexus between educators and employers in order to increase employment opportunities, especially for minorities, youth, women, and the handicapped. Mr. Smith contended that this effort to increase economic opportunities for disadvantaged groups should be the definition of affirmative action, rather than programs to establish rigid quotas through reverse discrimination. Mr. Smith believes that affirmative action, as here defined, should become an integral part of an organization's management planning, budgeting, and forecasting of staff needs, instead of being a separate program.

Dr. Leon Lessinger, Superintendent of Schools, Stockton, California, delivered a presentation entitled Quality Control in Industry and the Training Function in Industry and the Training Function in the Public Schools. Dr. Lessinger pointed out that a basic problem in American industry has been a weakness in the quality control area. Dr. Lessinger traced this weakness to poor basic training in the public schools. As a remedy he proposed an emphasis on Training Within Education (TWE) modeled after Training Within Industry (TWI) which was very successful during the two world wars. The essence of TWE is that students are not just presented with knowledge but must demonstrate their mastery of the necessary skills and ideas. The approach emphasizes student participation rather than passivity.

In his reaction to the presentations, Mr. Bart L. Luderman, Vice President and Human Resources Development Administrator, Lloyd's Bank, Los Angeles, emphasized his belief in the need for linkages between education and the private sector but showed some skepticism of the government's contribution. Mr. Luderman pointed out that many government-sponsored work projects (e.g., CETA) foster poor work discipline by providing their enrollees with benefits without requiring them to produce. Such easy treatment does not prepare the enrollees for the real world of work. Non-government programs, in contrast, provide real-life work environments.

The second reactor, Dr. Ralph Tyler, Senior Consultant, Science Research Associates, Chicago, Illinois, emphasized the importance of proper attitude for work. He pointed out that currently there is a lack of any sense of satisfaction and achievement in work. Individuals are solely concerned with consumption, not production. These attitudes develop initially with the home and family structure. This anti-work attitude must be changed if the U.S. is to achieve re-industrialization. Unfortunately, education alone cannot change this attitude since all of American society is imbued with it.

PART V. LIST OF CONFERENCE PARTICIPANTS

APPENDIX A

PARTICIPANTS

CONVENOR:

Kathleen F. Arns, President
Council for Occupational Education
Assistant Vice-President for Vocational Curriculum
Oakton Community College
Morton Grove, Illinois

MODERATOR:

Ann M. Martin, Associate Commissioner
Office of Occupational Planning
United States Department of Education
Washington, D.C.

PRESENTERS:

G. William Dudley, Executive Director
State Board for Technical Comprehensive Education
Columbia, South Carolina

Robert L. Craig, Director of Communications
American Society for Training and Development
Washington, D.C.

John Quimby
Small Business Administration
San Francisco, California

Clinton Smith, Board Member
National Association of Industry-Education Cooperation
Washington, D.C.

Leon Lessinger, Superintendent of Schools
Stockton, California

REACTORS:

Bart L. Luderman, Chairman
Vice President and Human Resource Development Administrator
Lloyds Bank
Los Angeles, California

Ralph W. Tyler, Senior Consultant
Science Research Associates
Chicago, Illinois